

IN THE CLAIMS

The following is a complete listing of the claims, and replaces all earlier versions and listings.

57. (Previously Presented) A microbiological testing apparatus, having an incubation chamber, said chamber comprising:

a carousel assembly adapted to mount a plurality of test panels each having a plurality of wells for receiving a test inoculum fluid for producing a reaction;

an enclosure surrounding said carousel assembly for preventing intrusion of ambient light into said incubation chamber, said enclosure having a door for providing access to said carousel assembly;

a drive system for continuously rotating said carousel assembly to directly position the test panels for testing by said diagnostic microbiological testing apparatus;

a heating unit for heating said incubation chamber; and

a temperature controller for controlling said heating unit to maintain the temperature of said incubation chamber within a predetermined temperature range.

58. (Currently Amended) ~~The~~ A microbiological testing apparatus ~~according to Claim 57, having an incubation chamber, said chamber comprising:~~

a carousel assembly adapted to mount a plurality of test panels each having a plurality of wells for receiving a test inoculum fluid for producing a reaction, wherein the carousel assembly further comprises comprising a carrier adapted to receive and carry the test panels;

an enclosure surrounding said carousel assembly for preventing intrusion of ambient light into said incubation chamber, said enclosure having a door for providing access to said carousel assembly;

a drive system for continuously rotating said carousel assembly to directly position the test panels for testing by said diagnostic microbiological testing apparatus;

a heating unit for heating said incubation chamber; and

a temperature controller for controlling said heating unit to maintain the temperature of said incubation chamber within a predetermined temperature range.

59. (Previously Presented) The microbiological testing apparatus according to Claim 57, further comprising means for determining a predetermined position of the carousel assembly.

60. (Previously Presented) A microbiological testing apparatus, comprising:

a carousel assembly, comprising:

a frame adapted to receive a panel carrier; and

said panel carrier for carrying a test panel having a plurality of wells for receiving a test inoculum fluid for producing a reaction, said panel carrier receiving the test panel so as to position the test panel in a predetermined manner.

61. (Previously Presented) A microbiological testing apparatus according to Claim 60, further comprising means for indicating a completion of testing.

62. (Previously Presented) A microbiological testing apparatus according to Claim 60, further comprising means for determining the leading edge of the test panel received therein.

63. (Previously Presented) A method of operating a diagnostic microbiological testing apparatus, comprising the steps of:

continuously rotating a carousel of the testing apparatus to position a test panel between a light source and a light detection unit of the testing apparatus, the test panel including a plurality of wells for receiving a inoculum fluid comprising a reagent and a microbiological test sample for producing a test reaction and being mounted on the carousel;

directing light from the light source toward the at least one test panel;

detecting with the light detection unit the light emitted from, or absorbed by, each of the wells of the at least one test panel due to the test reaction;

generating with the light detection unit a signal corresponding to the light detected from each of the wells; and

determining a test result for each of the wells based on the generated signal.

64. (Previously Presented) A method of performing diagnostic microbiological testing, comprising the steps of:

inoculating a plurality of test panels including a plurality of wells for receiving a inoculum fluid comprising a reagent and a microbiological test sample for producing a test reaction;

mounting the test panels on a carousel of a diagnostic microbiological testing apparatus; and

operating the testing apparatus to cause (1) the carousel to rotate continuously to position at least one test panel between a light source and a light detection unit of the testing apparatus, (2) a light from the light source to be directed toward the at least one test panel, (3) the light emitted from, or absorbed by, each of the wells of the at least one test panel due to the test reaction to be detected by the light detection unit, (4) a signal corresponding to the light detected from each of the wells to be generated by the light detection unit, and (5) a test result to be determined for each of the wells based on the generated signal.

65. (Currently Amended) A computer-readable medium having stored therein computer executable code which, when executed, performs a method of operating a diagnostic microbiological testing apparatus, ~~stored on a computer-readable medium, the method~~ comprising the steps of:

~~instructions for~~ continuously rotating a carousel of the testing apparatus to position at least one test panel between a light source and a light detection unit of the testing apparatus, the test panel including a plurality of wells for receiving a inoculum fluid comprising a reagent and a microbiological test sample for producing a test reaction and being mounted on the carousel;

~~instructions for~~ activating light from the light source to illuminate the at least one test panel;

~~instructions for~~ detecting with the light detection unit the light emitted from, or absorbed by, each of the wells of the at least one test panel due to the test reaction;

~~instructions for~~ generating with the light detection unit a signal corresponding to the light detected from each of the wells; and

~~instructions for~~ determining a test result for each of the wells based on the generated signal.

66. (Currently Amended) A computer-readable medium having stored therein computer executable code which, when executed, performs a method for operating a diagnostic microbiological testing apparatus, stored on a computer-readable medium, the method comprising the steps of:

~~instructions for controlling the rotation speed of rotating~~ a carousel of the testing apparatus, on which are mounted a ~~to move continuously at least one~~ test panel and ~~at least one~~ a normalizer panel, past a light source and a light detection unit of the testing apparatus at a predetermined angular velocity, the test panel including a plurality of wells for receiving a inoculum fluid comprising a reagent and a microbiological test sample for producing a test reaction ~~and being mounted on the carousel, and~~ the normalizer panel including a plurality of normalization wells;

~~instructions for~~ detecting with the light detection unit the light emitted from, or absorbed by, ~~each one or more~~ of the normalization wells of the ~~at least one~~ normalizer panel, and the light emitted from, or absorbed by, one or more of the wells of the test panel due to the test reaction; and

~~instructions for normalizing the light emitted from, or absorbed by, each of the wells of the at least one detected test panel light using the detected normalizer panel light due to the test reaction and detected with the light detection unit;~~

~~instructions for generating with the light detection unit a signal corresponding to the normalized light from each of the wells; and~~

~~instructions for determining a test result for each of the wells based on the generated signal.~~

67. (Currently Amended) A ~~method~~ computer-readable medium according to Claim 66, the method further comprising the steps of:

~~instructions for~~ monitoring a light intensity of light from the light source directed toward the ~~at least one~~ normalizer panel; and

~~instructions for~~ taking corrective action if the light intensity is outside a predetermined range.

68. (Canceled)

69. (New) A computer-readable medium according to Claim 66, the method further comprising the steps of:

generating with the light detection unit a signal corresponding to the normalized light from the one or more wells of the test panel; and

determining a test result for each of the one or more wells of the test panel based on the generated signal.

70. (New) A computer-readable medium according to Claim 66, wherein said normalizing step normalizes light on a well-by-well basis.

71. (New) A diagnostic microbiological testing apparatus, comprising:

a light source;

a light detection unit; and

a carousel, on which are mounted a test panel including a plurality of wells for receiving a inoculum fluid comprising a reagent and a microbiological test sample for producing a test reaction, and a normalizer panel including a plurality of normalization wells, the carousel being controlled to move past the light source and the light detection unit at a predetermined angular velocity,

wherein the light detection unit detects the light emitted from, or absorbed by, one or more of the normalization wells of the normalizer panel and the light emitted from, or absorbed by, one or more of the wells of the test panel due to the test reaction, and normalizes the detected test panel light using the detected normalizer panel light.

72. (New) A method for operating a diagnostic microbiological testing apparatus, comprising the steps of:

rotating a carousel of the testing apparatus, on which are mounted a test panel and a normalizer panel, past a light source and a light detection unit of the testing apparatus at a predetermined angular velocity, the test panel including a plurality of wells for receiving a inoculum fluid comprising a reagent and a microbiological test sample for producing a test reaction, and the normalizer panel including a plurality of normalization wells;

detecting with the light detection unit the light emitted from, or absorbed by, one or more of the normalization wells of the normalizer panel, and the light emitted from, or absorbed by, one or more of the wells of the test panel due to the test reaction; and
normalizing the detected test panel light using the detected normalizer panel light.